



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Holger Schlueter Art Unit: 2828
Serial No.: 10/763,390 Examiner: Unknown

Filed: January 26, 2004 Title: FIBER LASER

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

REQUEST FOR CORRECTED OFFICIAL FILING RECEIPT

Please correct the Filing Receipt for the above-referenced application to correct the claim for domestic priority. Specifically, this application claims the benefit of U.S. provisional application Serial Nos. 60/442,123, filed 1/24/2003, and 60/470,446, filed May 15, 2003, as shown on the attached copy of the first page of the specification of this application.

Please supply a corrected Filing Receipt to the undersigned with respect to this application. A copy of the original Filing Receipt showing the desired changes in red ink is attached for your convenience.

No fee is believed to be due. If, however, there are any charges or credits, please apply them to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 6/30/04

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Attorney Docket No.: 14624-004001



FIBER LASER

CLAIM OF PRIORITY

This application claims priority under 35 USC §119(e) to U.S. Patent Applications Serial No. 60/442,123, filed on January 24, 2003, and Serial No. 60/470,446, filed on May 15, 2003, the entire contents of which are hereby incorporated by reference.

TECHNICAL FIELD

This invention relates to lasers, and more particularly to fiber lasers.

BACKGROUND

Diode pumped fiber lasers have a long, thin geometry that allows better heat removal than the geometry of bulk solid state lasers. Currently, pump light, often piped through fibers from pump lasers, enters an outer core of the fiber laser, where it is confined and redirected to pass through an inner core of the fiber laser where it excites laser active material to produce and amplify light. Pump light may enter the fiber either through the end of the fiber or through the side of the fiber.

The output wavelength of many solid state lasers is between about 1-2 μ m. Semiconductor materials can be doped with dopants such as Nd, Er, Yb, Vn to achieve a laser output within this wavelength range. Therefore, the following text assumes that the below-described fiber lasers have an output wavelength in this range. In case the output wavelength differs from this assumption, dimensions of the fiber laser are scaled appropriately with the output wavelength.

To convert pump light power into output laser power at the desired wavelength over the length of the fiber, a "double-clad fiber laser" has been used. Such a double-clad fiber laser typically consists of a single-mode core (for the output laser wavelength) that is embedded in a multi-mode cladding (for the pump laser wavelength), which itself can be embedded in an outer cladding.

The multi-mode cladding of a fiber laser has a diameter that is on the order of several ten to several hundred μm in diameter. The multi-mode cladding transmits the light from

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Title

Fiber laser

Non-Publication Request: No

Early Publication Request: No

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